CATERPILLAR®

Caterpillar Inc.
P.O. Box 600
Mossville, Illinois 61552

November 3, 2014

CAT201404

Mr. Justin Greuel
Director, Diesel Engine Compliance Center
U.S. Environmental Protection Agency
Office of Transportation & Air Quality
1200 Pennsylvania Ave, NW
Washington, DC 20460

Emissions Defect Information Report

Dear Mr. Greuel:

Pursuant to 40 CFR § 1068.501, Caterpillar Inc. has determined that certain C13, C15, C27, and C32 engines were built with injectors that may have an incorrect plunger and body clearance. The affected engines are from MY2013 and MY2014, engine families DCPXL12.5HPA, DCPXL12.5HPB, DCPXL12.5HTF, DCPXL15.2HPA, DCPXL15.2HTF, DCPXL27.0HXF, DCPXL27.0HYA, DCPXL27.0HZA, DCPXL32.0HXF, DCPXL32.0HZA, ECPXL12.5HTF, ECPXL15.2HTF, ECPXL27.0HXF, ECPXL27.0HYA, ECPXL27.0HZA, ECPXL32.0HXF, and ECPXL32.0HZA. This emissions defect information report contains trade secrets, proprietary, and/or company confidential information and should be treated as such under 40 CFR § 2.203(b) and § 1068.10.

An EDIR is attached, which provides information concerning the issue and the manner in which it will be corrected.

If you have any questions or require additional information, please call.

Sincerely,

[redacted]
Manager, Emissions Conformance and Systems Development
Large Power Systems Division (MOS 11)
Caterpillar Inc.

[redacted]

cc: Erik White – ARB

EMISSIONS DEFECT INFORMATION REPORT

1) Manufacturer's corporate name and a person to contact regarding this defect:

Caterpillar Inc.
[redacted]
Manager, Emissions Conformance and Systems Development
[redacted]

2) Description of the defect, including a summary of any engineering analyses and associated data, if available:

Injectors have been assembled with an incorrect clearance between the plunger and the barrel. The design clearance was not met on these parts due to an incorrect calibration of the gauging used in the select fit assembly process.

3) Description of the engine/equipment that have the defect, including families, models, and range of production dates.

Engine Family	Model	Production Dates
DCPXL12.5HPA	C13	04Sep2013 – 31Dec2013
DCPXL12.5HPB	C13	04Sep2013 – 31Dec2013
DCPXL12.5HTF	C13	04Sep2013 – 31Dec2013
DCPXL15.2HPA	C15	04Sep2013 – 31Dec2013
DCPXL15.2HTF	C15	04Sep2013 – 31Dec2013
DCPXL27.0HXF	C27	04Sep2013 – 31Dec2013
DCPXL27.0HYA	C27	04Sep2013 – 31Dec2013
DCPXL27.0HZA	C27	04Sep2013 – 31Dec2013
DCPXL32.0HXF	C32	04Sep2013 – 31Dec2013
DCPXL32.0HZA	C32	04Sep2013 – 31Dec2013
ECPXL12.5HTF	C13	01Jan2014 – 05Sep2014
ECPXL15.2HTF	C15	01Jan2014 – 05Sep2014
ECPXL27.0HXF	C27	01Jan2014 – 05Sep2014
ECPXL27.0HYA	C27	01Jan2014 – 05Sep2014
ECPXL27.0HZA	C27	01Jan2014 – 05Sep2014
ECPXL32.0HXF	C32	01Jan2014 – 05Sep2014
ECPXL32.0HZA	C32	01Jan2014 – 05Sep2014

The filing of a Defect Information Report pursuant to EPA regulations is not conclusive as to the applicability of the Production and Performance Warranties provided by Section 207(a) and 207(b) of the Clean Air Act, as amended, or Section 43204 of the California Health and Safety Code. Trade Secrets, Proprietary and/or Company Confidential Information Subject to Protection Under 40 CFR § 2.203(b) and § 1068.10.

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4i) An estimate of the number and percentage of each class or category of affected engines that have the defect, and an explanation of how you determined this number:

Currently, the following number of engines is known to be affected by this defect based on the number of assembled engines.

Model Year	Engine Family	Number of Affected Engines	Total U.S. Directed Volumes	Defect Percentage
2013	DCPXL12.5HPA			
2013	DCPXL12.5HPB			
2013	DCPXL12.5HTF			
2013	DCPXL15.2HPA			
2013	DCPXL15.2HTF			
2013	DCPXL27.0HXF			
2013	DCPXL27.0HYA			
2013	DCPXL27.0HZA			
2013	DCPXL32.0HXF			
2013	DCPXL32.0HZA			
2014	ECPXL12.5HTF			
2014	ECPXL15.2HTF			
2014	ECPXL27.0HXF			
2014	ECPXL27.0HYA			
2014	ECPXL27.0HZA			
2014	ECPXL32.0HXF			
2014	ECPXL32.0HZA			

4ii) Describe any statistical methods used to determine the number of affected engines:

No statistical methods or tools were used. Counts were based on actual build data.

5i) An estimate of the defect's impact on emissions, with an explanation of how you calculated this estimate:

The emissions impact of this defect is negligible; engines with this defect still meet the applicable emissions standards. If this defect is present, the calibration and controls of the injector will still perform as designed. This defect may allow additional amounts of fuel to leak into the engine oil. It is common procedure to check the fuel dilution of the engine oil at oil change intervals. If the fuel dilution is above specified standards, Caterpillar has published guidelines on how to investigate the cause, and address this issue.

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5ii) Available summary of any emissions data demonstrating the impact of the defect:

No emissions data was collected. Emissions impact is based upon engineering analysis.

6) A description of your plan for addressing the defect or an explanation of your reasons for not believing the defects must be addressed:

Caterpillar has corrected the gauging calibration. Caterpillar has updated the process to include a redundant verification for gauge calibration, increased the gauge certification frequency, and modified the injector end-of-line testing to ensure control of this process. Caterpillar has identified and removed suspect injectors from our manufacturing plants and parts distribution facilities and replaced with correct injectors. Caterpillar will replace defective parts upon failure within the warranty period.